To: **T10 Committee**
From: **Gerry Houlder, Seagate Technology** <gerry_houlder@notes.seagate.com>
Subj: **Allow Write Buffer when drive not ready**
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In SPC-2, the Persistent Reservation model lists a small group of commands that are allowed to be performed when the target device is in Not Ready state. I wish to add Write Buffer command to this list. The reason is that target devices are often in a Not Ready state when they have a problem. A factory or repair facility will be locked out from repair actions because of the small number of commands that are allowed. If a Write Buffer is also allowed, then factory firmware that defeats the Persistent Reservation firmware can be downloaded onto the drive. This will allow all of the diagnostic operations necessary to troubleshoot the problem.

In discussions with Larry Lamers (Adaptec), he expressed desire to allow domain validation (requiring use of both Write Buffer and Read Buffer) while the device is in a Not Ready state. I have added Read Buffer to my list to accommodate this desire.

My recommended addition is the underlined text. Needed deletion is in strikethrough.

5.3.2.1 Preserving persistent reservations

[unchanged paragraphs not shown]

The capability of preserving persistent reservations and registration keys across power cycles requires the use of a nonvolatile memory within the SCSI device. Any SCSI device that supports the Persist Through Power Loss (APTPL) capability of persistent reservation and has nonvolatile memory that is not ready shall allow the following commands into the task set:

a) INQUIRY;
b) LOG SENSE;
c) REPORT LUNS;
d) REQUEST SENSE; ~~and~~
e) START/STOP UNIT (with START bit = 1 and POWER CONDITIONS field value of 0).
f) WRITE BUFFER; and
g) READ BUFFER.

When nonvolatile memory is not ready, any commands, other than those listed above shall return CHECK CONDITION status. The sense key shall be set to NOT READY and the additional sense data shall be set as described in the TEST UNIT READY command (see 7.25).